Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A differential amplitude detection diversity receiver employing maximal ratio combining ~~MRC~~, comprising:

a plurality ~~majority~~ of decision variable calculating sections, each ~~configured to compute~~ computing at least one amplitude decision variable ~~variables~~, said amplitude decision variable being computed by multiplying ~~the~~ a distance ~~distances~~ of a signal by an amplitude of the signal, the signal being ~~the amplitudes of signals currently~~ received at ~~each antenna~~ one or more antennas; and

an amplitude decision section ~~configured to compose~~ ~~the~~ for composing each computed amplitude decision ~~variables~~ variable of said plurality of decision variable calculating sections and ~~to determine~~ for determining said ~~the~~ amplitude of the received signal by selecting an amplitude candidate value, said amplitude candidate value corresponding to a ~~certain~~ composed amplitude decision variable from ~~the~~ said ~~composed amplitude decision variables~~ plurality of decision variable calculating sections.

Claim 2 (Currently amended): The diversity receiver of claim 1, wherein ~~the~~ each of said plurality of decision variable calculating ~~section~~ sections comprises:

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a plurality ~~majority~~ of differential amplitude calculators ~~Differential Amplitude Calculators~~ (DAC) ~~configured to calculate the~~ for calculating an amplitude ratio ~~ratios~~ between ~~the~~ an amplitude ~~amplitudes~~ of the signal being received at ~~the~~ an (n)th sampling period and an amplitude of the signal being received at an (n-1)th sampling period, wherein n is an integer ~~(where n is integer)~~; and

a plurality ~~majority~~ of ~~Amplitude Hypothesis Calculators~~ amplitude hypothesis calculators (AHC) ~~configured to~~ for ~~compute~~ computing said ~~the~~ amplitude decision variable ~~variables~~ of the received signal, each of said plurality of amplitude hypothesis calculators ~~by~~ calculating ~~the~~ a distance, the distance being ~~distances,~~ between ~~the~~ said amplitude ratio ~~ratios~~ of the signal ~~signals~~ being received at each of said ~~antenna~~ one or more antennas, and ~~each~~ said amplitude candidate value, and by multiplying the distance ~~distances~~ by ~~the~~ said amplitude ~~amplitudes~~ of the signal ~~signals~~ being received at ~~the~~ said (n)th sampling period.

Claim 3 (Currently amended): The diversity receiver of claim 1, wherein ~~the~~ said amplitude decision section comprises:

an ~~Amplitude Combiner~~ amplitude combiner (AC) ~~configured to compose the~~ for composing said amplitude decision variable being ~~variables of each antenna,~~ computed by ~~the~~ each of said plurality of decision variable calculating ~~section~~ sections, each amplitude decision variable of said plurality of decision variable calculating

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sections being composed by said amplitude combiner according to ~~the~~ said amplitude candidate value ~~values~~; and

an ~~Amplitude Detector~~ amplitude detector (AD) ~~configured to~~ for ~~determine~~ determining ~~the~~ said amplitude of the received signal by selecting said amplitude candidate value corresponding to ~~the~~ said composed amplitude decision variable of each of said plurality of decision variable calculating sections, ~~whose~~ said composed amplitude decision variable having a magnitude, said magnitude ~~is the~~ being a minimum among ~~the~~ each of said composed amplitude decision ~~variables~~ variable of said plurality of decision variable calculating sections.

Claim 4 (Currently amended): A method of receiving signals using a differential amplitude detection diversity receiver employing ~~MRC~~ maximal ratio combining, comprising:

computing an amplitude decision variable, said amplitude decision variable being computed ~~variables~~ by multiplying ~~the~~ a distance ~~distances~~ between ~~the~~ an amplitude ratio ~~ratios~~ of each of the signals being received at ~~each~~ one or more antennas, and ~~each~~ an amplitude candidate value by ~~the~~ said amplitude ~~amplitudes~~ of each of the signals ~~currently~~ being received at ~~each~~ said one or more antennas ~~antenna~~;

composing ~~the~~ said amplitude decision variable ~~variables~~ of each of said one or more antennas ~~antenna~~, said amplitude decision variable being composed according to ~~the~~ said amplitude candidate value ~~values~~; and

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determining ~~the~~ said amplitude of ~~the received signal~~ each of the signals by selecting said amplitude candidate value corresponding to ~~the~~ said composed amplitude decision variable~~, whose~~ said selected amplitude candidate value having a magnitude, said magnitude ~~is the~~ being a minimum among ~~the~~ said composed amplitude decision variable ~~variables~~ of each of the signals.

Claim 5 (Currently amended): The method of claim 4, wherein said ~~computing~~ computed amplitude decision variable ~~variables~~ comprises:

calculating ~~the~~ said amplitude ratio ~~ratios~~ between ~~the~~ an amplitude ~~amplitudes~~ of the ~~signal~~ signals being received at ~~the~~ an (n)th sampling period and an amplitude of the signals being received at an (n-1)th sampling period ~~(where n is integer)~~, wherein n is an integer;

calculating the distance, the distance being ~~distances~~ between ~~the~~ said amplitude ratio ~~ratios~~ of each of the signals being received at said one or more antennas ~~each antenna~~ and ~~each~~ said amplitude candidate value; and

computing ~~the~~ said amplitude decision variable ~~variables~~ of each of the ~~received signal~~ signals by multiplying the distance ~~distances~~ by ~~the~~ said amplitude of the signals being ~~amplitudes of signals~~ received at ~~the~~ said (n)th sampling period.

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